

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 10/562,602  
Applicant (s) : John R. Briggs, et al.  
Filed : December 28, 2005  
TC/A.U. : Unknown  
Examiner : Unknown  
Title : MINIMIZATION OF LIGAND DEGRADATION PRODUCTS,  
OR REVERSION OF SAME TO USEFUL PHOSPHINE  
LIGANDS  
Docket No. : 62213A  
Customer No. 35503

I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING  
DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS  
FIRST CLASS MAIL WITH SUFFICIENT POSTAGE IN AN ENVELOPE  
ADDRESSED TO: COMMISSIONER FOR PATENTS, P.O. BOX 1450,  
ALEXANDRIA, VA 22313/1450, ON:

May 5, 2006

DATE OF DEPOSIT

Tamara L. Grove

PRINT OR TYPE NAME OF PERSON SIGNING CERTIFICATE

*Tamara L. Grove*

SIGNATURE OF PERSON SIGNING CERTIFICATE

*May 5, 2006*

DATE OF SIGNATURE

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

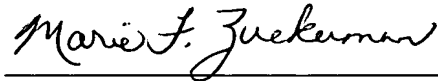
INFORMATION DISCLOSURE STATEMENT

Pursuant to Applicant's duty of disclosure under 37 CFR §1.56, the  
Examiner's attention is directed to the information identified in the attached Form  
PTO/SB/08a.

The cited U.S. patents and patent application publications are listed on Form  
PTO/SB/08a. A copy of the cited foreign patent documents and non-patent literature

are enclosed herewith. The Examiner is requested to review each reference and formulate his/her own understanding thereof.

Respectfully submitted,



---

Marie F. Zuckerman  
Registration No. 31,315  
Phone: (203) 248-3907

P. O. Box 1967  
Midland, MI 48641-1967

MFZ/tlg

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

**Complete if Known**

Application Number	10/562,602
Filing Date	December 28, 2005
First Named Inventor	Briggs, John R., et al.
Art Unit	Not Assigned
Examiner Name	Not Assigned
Attorney Docket Number	62213A

Sheet 1 of 3

MAY 09 2006

**U. S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. 1	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date (MM-DD-YYYY)	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		US-3,527,809	09-08-1970	Pruett, Roy L., et al.	
		US-4,148,830	04-10-1979	Pruett, Roy L., et al.	
		US-4,269,781	05-26-1981	Vanderspurt, Thomas H., et al.	
		US-4,283,562	08-11-1981	Billig, Ernst, et al.	
		US-4,400,548	08-23-1983	Abatjoglou, Anthony G., et al.	
		US-4,593,127	06-03-1986	Bunning, Donald L., et al.	
		US-4,717,775	01-05-1988	Billig, Ernst, et al.	
		US-4,769,498	09-06-1988	Billig, Ernst, et al.	
		US-4,774,361	09-27-1988	Maher, John M., et al.	
		US-4,885,401	12-05-1989	Billig, Ernst, et al.	
		US-5,180,854	01-19-1993	Abatjoglou, Anthony G. et al.	
		US-5,264,616	11-23-1993	Roeper, Michael, et al.	
		US-5,288,918	02-22-1994	Maher, John M.	
		US-5,360,938	11-01-1994	Babin, James E., et al.	
		US-5,364,950	11-15-1994	Babin, James E., et al.	
		US-5,491,266	02-13-1996	Babin, James E., et al.	
		US-5,495,041	02-27-1996	Sielcken, Otto E., et al.	
		US-5,693,851	12-02-1997	Sielcken, Otto E., et al.	
		US-5,741,945	04-21-1998	Bryant, David, et al.	
		US-5,886,237	03-23-1999	Packett, Diane L., et al.	
		US-6,034,286	03-07-2000	Guram, Anil S., et al.	
		US-6,191,324 B1	02-20-2001	Guram, Anil S., et al.	
		US-6,294,700 B1	09-25-2001	Kanel, Jeffrey S., et al.	
		US-6,303,829 B1	10-16-2001	Kanel, Jeffrey S., et al.	
		US-6,369,283 B1	04-09-2002	Guram, Anil S., et al.	
		US-2002/007096 A1	01-17-2002	Packett, Diane L., et al.	
		US-2002/0183196 A1	12-05-2002	Yada, Kazuyuki, et al.	
		US-2006/0058557	03-16-2006	Peng, Wei-Jun, et al.	

Examiner  
SignatureDate  
Considered

\*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>Form Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P. O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/562,602
				Filing Date	December 28, 2005
				First Names Inventor	Briggs, John R., et al.
				Art Unit	Not Assigned
				Examiner Name	Not Assigned
Sheet	2	Of	3	Attorney Docket Number	62213A

[illegible]

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>Form Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached. This collection of Information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P. O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE STATEMENT  
BY APPLICANT**

(Use as many sheets as necessary)

*Complete if Known*

Sheet	3	of	3	Application Number	10/562,602
				Filing Date	December 28, 2005
				First Named Inventor	Briggs, John R., et al.
				Art Unit	Not Assigned
				Examiner Name	Not Assigned
				Attorney Docket Number	62213A

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. 1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>6</sup>
		A. BENYEI et al., "The Effect of Phosphonium Salt Formation on the Kinetics of Homogeneous Hydrogenations in Water Utilizing a Rhodium Meta-Sulfonatophenyl-Diphenylphosphine Complex", <i>Journal of Molecular Catalysis</i> , (1993) 84, 157-163	<input type="checkbox"/>
		MALCOLM A. SHAW et al., "Addition Reactions of Tertiary Phosphorus Compounds with Electrophilic Olefins and Acetylenes," <i>Topics in Phosphorus Chemistry</i> , (1972) 7, 1-35	<input type="checkbox"/>
		WM. A. HENDERSON, JR. et al., "The Nucleophilicity of Phosphines", <i>Journal of the American Chemical Society</i> , (1960) 82, 5794-5800	<input type="checkbox"/>
		CHADWICK A. TOLMAN, "Steric Effects of Phosphorus Ligands in Organometallic Chemistry and Homogeneous Catalysis," <i>Chemical Reviews</i> , (1977) 77(3), 313-348	<input type="checkbox"/>
		MD. MATIUR RAHMAN, et al., "Separation of Phosphorus (III) Ligands into Pure $\sigma$ -Donors and $\sigma$ -Donor/ $\pi$ -Acceptors: Comparison of Basicity and $\sigma$ -Donicity <sup>1</sup> ", <i>Organometallics</i> , (1989) 8(1), 1-7	<input type="checkbox"/>
		WM. A. HENDERSON, JR. et al., "The Basicity of Phosphines", <i>Journal of the American Chemical Society</i> , (1960) 82, 5791-5794	<input type="checkbox"/>
		TIM ALLMAN et al., "The Basicity of Phosphines", <i>Canadian Journal of Chemistry</i> (1982) 60(6), 716-722	<input type="checkbox"/>
		FENTON, et al., "Influence of Poles and Polar Linkings on the Course Pursued by Elimination Reactions. Part V. The Mechanism of Thermal Decomposition of Quarternary Phosphonium Hydroxides," <i>Journal of the Chemical Society</i> , Part 2, (1929), 2342-2357	<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>

Examiner Signature	Date Considered
--------------------	-----------------

\*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (option). <sup>2</sup>Applicant is to place a check mark here in English language Translation is attached.

This collection of information is required 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P. O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2